

CASSETTE CAR STEREO  
WITH FM/AM ELECTRONIC TUNER

**SUPER TUNER**

# OWNER'S MANUAL

Thank you for purchasing this PIONEER product. Before attempting operation, be sure to read this manual.

Nous vous remercions d'avoir acheté cet appareil PIONEER. Avant de l'utiliser, prendre soin de lire ce manuel.

Muchas gracias por la adquisición de este producto PIONEER. Antes de tratar de operarlo, lea atentamente este manual.

شكرا لك على شرائك جهاز بايونير هذا. قبل محاولة تشغيله تأكد من قراءة هذا الدليل.



KE-3232

**PIONEER®**

OWNER'S  
MANUAL



# Features

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- Built-in highly sensitive "Super Tuner" for automatic control of stereo separation, muting, and frequency characteristics to match the strength of the FM signal.
- Seek tuning for automatic tuning to the next higher or lower broadcast on the band.
- Preset tuning function for frequency selection at the touch of a button.
- For AM reception, a tuning step is switchable to the other according to the zonal frequency range.
- Auto reverse function eliminates the need to turn the cassette over and allows uninterrupted playback.
- Auto-replay function automatically restarts playback from the beginning of the tape after rewind.
- Tape switch for selection of metal/chrome and normal tape modes.

(This feature is provided with the KE-3232.)

- Built-in 12-hour format digital clock. —
- When an operationally available power amp with RCA terminal is used in combination with a 4-speaker system equipped with built-in amp, a 4-speaker system with fader control capabilities operates as well. Built in "Flex Fader Control"

(This feature is provided with the KE-3232.)



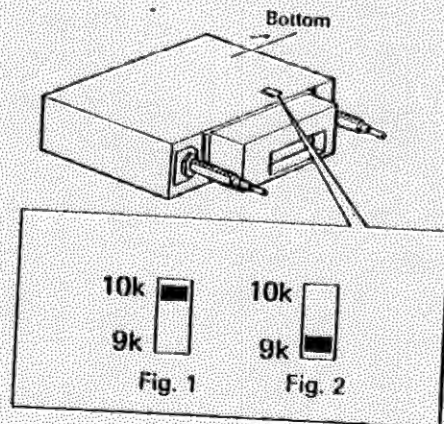
# Switching the Tuning Steps

## ● Tuning Step Switch

The tuning step switch is located on the bottom of the unit and is set at shipment from the factory as shown in Fig. 1. The setting of this switch should be changed to that shown in Fig. 2 for use in Europe, Asia, the Middle and Near East, Africa, Australia and Oceania.

- Be sure to disconnect the  $\ominus$  terminal connector from the car battery to prevent short circuits.

Specification		Initial Setting	New Setting
AM	Tuning steps	10 kHz steps	9 kHz steps
	Frequency range	530 — 1,620 kHz	531 — 1,602 kHz



# Connections

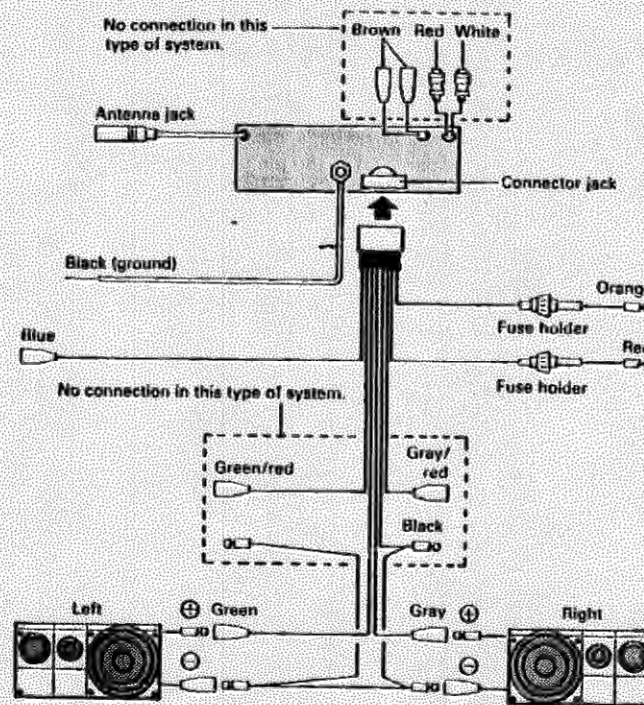
## Note:

- To avoid shorts in the electrical system, be sure to disconnect the battery  $\ominus$  cable before beginning installation.
- Replace fuses only with the types stipulated on the fuse holder.
- Be sure to properly connect the color coded leads. Failure to do so can cause malfunctions.
- Cover unused terminals with tape to prevent electrical shorts. (KE-3232)
- Refer to the power amp owner's manual when connecting a power amp (sold separately) to the pin jack.
- When using a separately available power amp with RCA terminal in a 4-speaker system with fader control capabilities, connect the brown leads from this unit to the green and gray output leads of this unit. (KE-3232)

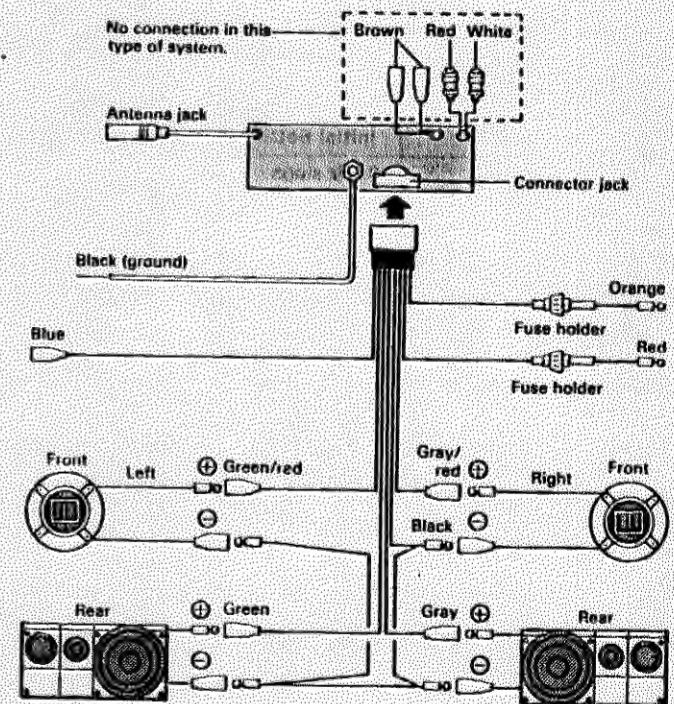
<b>Black (ground)</b>	To vehicle (metal) body.
<b>Blue</b>	System control/Auto-antenna relay control terminal (Max. 300 mA 12 V DC).
<b>Orange</b>	To terminal always supplied with power regardless of ignition switch position.
<b>Red</b>	To electric terminal controlled by ignition switch (12 V DC) ON/OFF.



# **KE-3232** **2-speaker system**



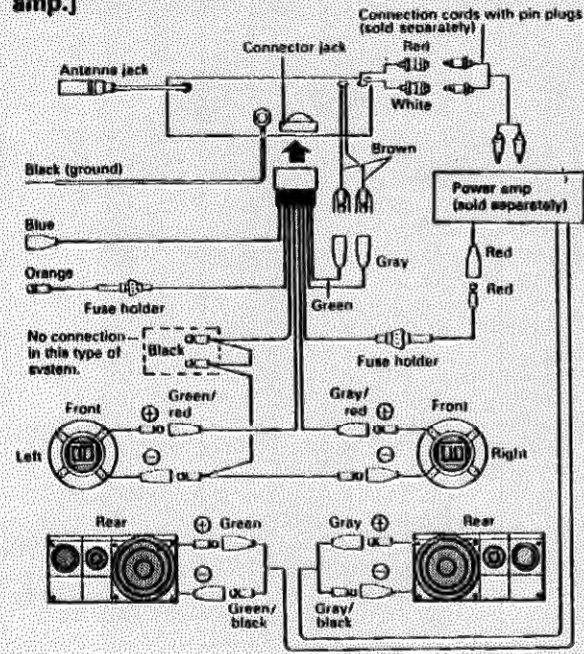
# **KE-3232** **4-speaker system 1**



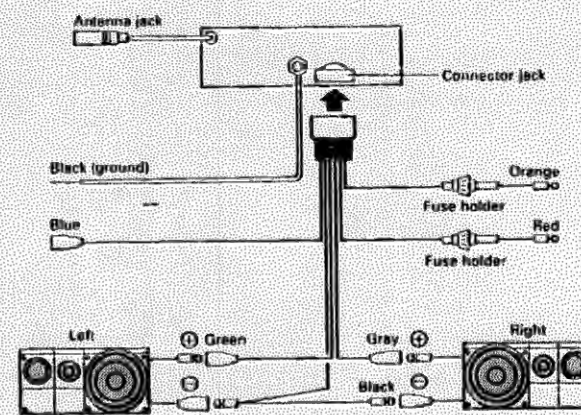


# KE-3232

4-speaker system 2 [Using separately available amp.]



# KE-2222





# Installation

## Note:

- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance. (Fig. 1)

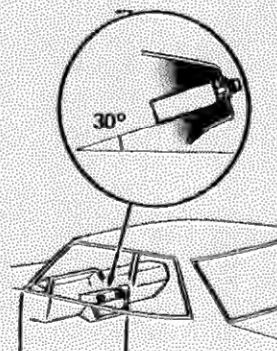
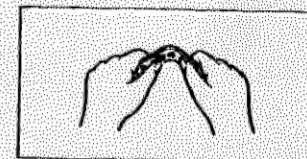


Fig. 1

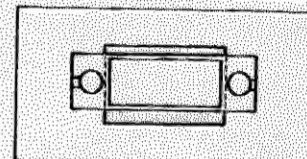
## Strap

Be sure to use the strap to secure the back of the unit in place to prevent wobble and flutter. The strap can be bent by hand to the desired angle.



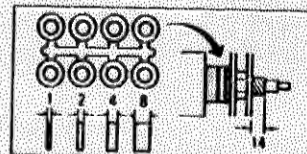
## Front cover

The front cover is used when the installation hole in the dashboard is so large that gaps appear along the top and bottom edges of the unit.



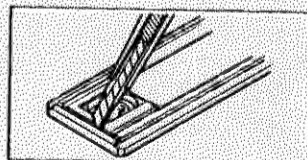
## Spacer washer

If the shaft extends from the dashboard more than 14 mm, use the spacer washers to adjust the length.



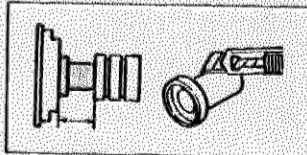
## Front panel

The front panel can be cut along the ridges on the back if it is too large to be installed as furnished.



## Shaft cover

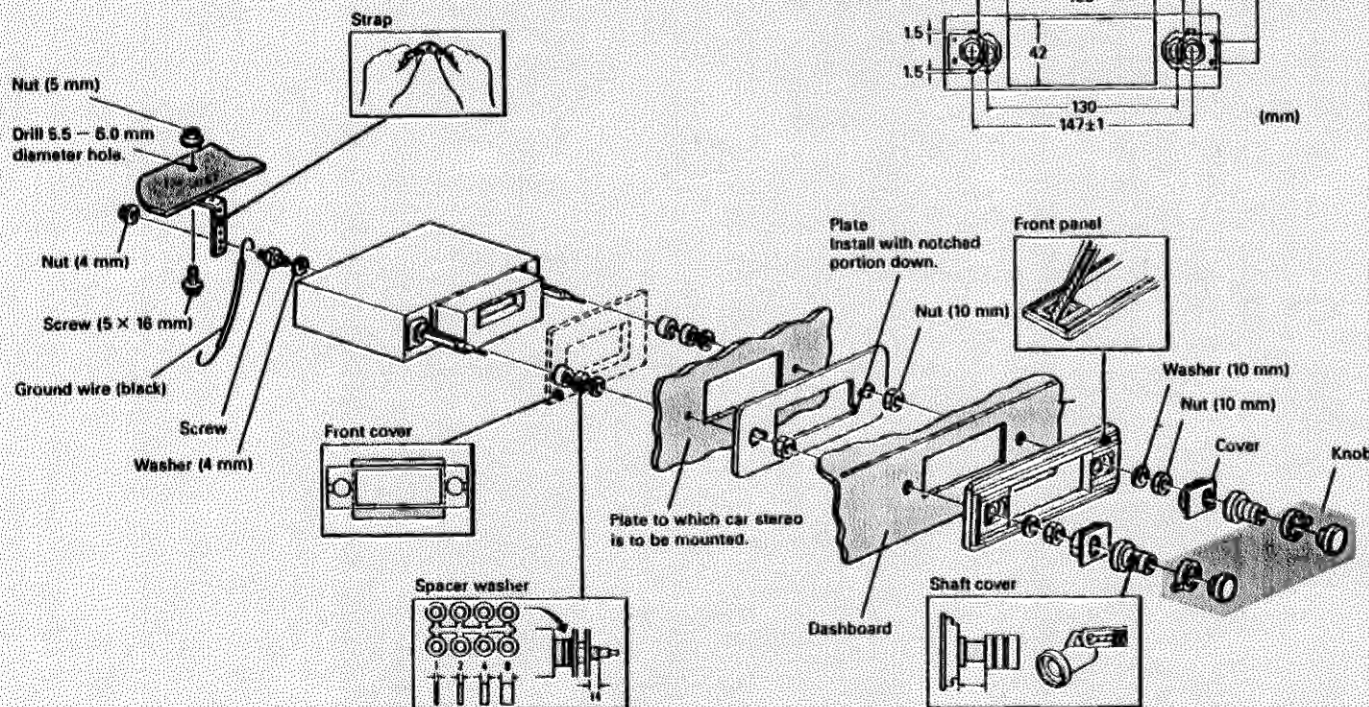
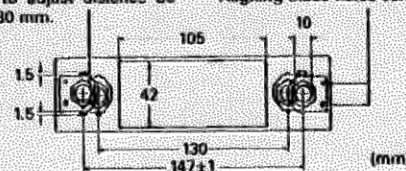
Cut the shaft cover to the proper size to fill any gap which may occur between the front panel and control knob.





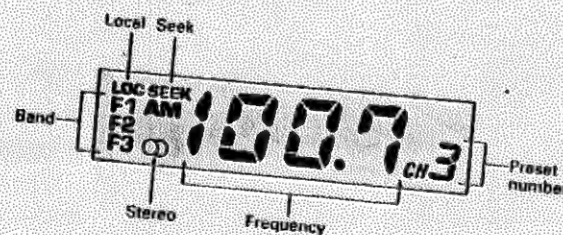
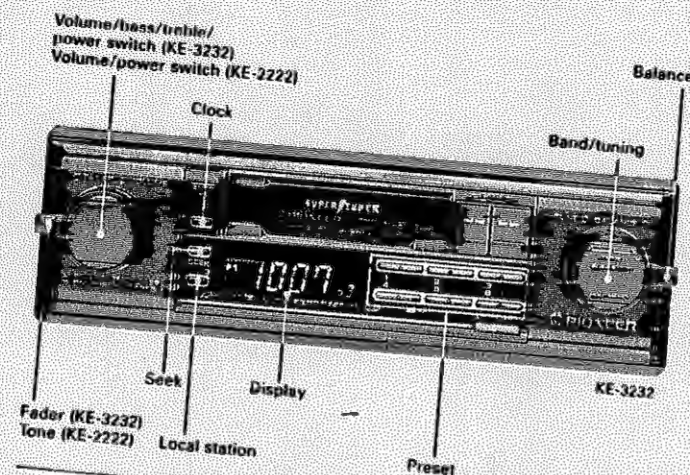
# • Adjusting the shaft interval

Loosen this nut to adjust distance between shafts to 130 mm. Aligning these holes centers the shaft.





# Using the Radio



## • Before attempting operation...

- Reduce the volume by turning the volume control knob to the left.

- Set the fader control to the left horizontal. (KE-3232)

1. Turning the power switch to the right causes power to switch ON and the current frequency to appear on the display.
2. Press the band switch to select the band.
3. Press the seek button and the seek tuning indicator will be displayed.
4. Turn the tuning knob to the left or right to tune in the desired frequency. (Turning to the right will increase the frequency.)
5. Adjust the volume and balance.

## KE-3232

6. Adjust the tone to the desired position. To adjust bass, turn the volume knob while pressing it. For treble, turn the volume knob after it has been pulled out until it clicks into place. Return the volume knob after adjusting the tone.

## KE-2222

6. Adjust the tone.

## • To enter a frequency into the preset memory...

7. Pull the tuning knob and preset number will flash. (approximately 5 seconds)
- Within 5 seconds, press one of the preset buttons (1 – 6) to enter the frequency into the memory. At this time the number of the button pressed will be displayed. Six FM1 frequencies, six FM2 frequencies, six FM3 frequencies and six AM frequencies can be entered.



### ● Local Station Switch

Pressing this switch lowers the seek tuning reception sensitivity so that only stronger signals can be tuned in. This feature is convenient when driving through areas that have numerous radio stations. When this switch is depressed, the local indicator will be illuminated on the display.

### ● Fader Control (KE-3232)

This control is used to adjust the balance between the front and rear speakers when using a 4-speaker system. Turning the control upwards decreases the volume of the rear speakers, while turning it downwards decreases the volume of the front speakers. With 2-speaker systems, set this control to a horizontal position.

#### Important

A considerable amount of sound will continue to be produced from speakers of a 4-speaker system which have been cut by setting the fader control either to the front speakers or rear speakers. This tendency is especially noticeable when an separately available amp is connected. This is normal and does not indicate malfunction.

### ● Auto-Loudness

When playing back a tape or listening to the radio at low volume, the low tone is automatically emphasized.

### ● Clock Switch

Each press causes the display to switch between clock and frequency.

## Seek Tuning

Press the seek button, and tuning to the next higher or lower broadcast on the band can be accomplished automatically by simply turning the tuning knob to the left or right. FM frequencies change in 50 kHz steps while those in the AM band change in 10 kHz steps.

- AM frequencies are tuned in 9 kHz steps after the tuning steps are changed.

## Preset Tuning

Pressing the preset button instantly tunes in the frequency programmed in the memory for that button.

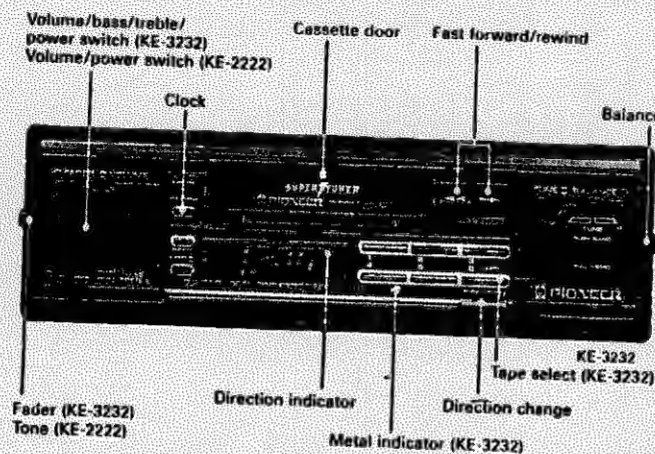
## Manual Tuning

When manual tuning is employed, FM frequencies change in 50 kHz steps while AM frequencies change in 10 kHz steps.

- AM frequencies are tuned in 9 kHz steps after the tuning steps are changed.
1. Press the seek button and the seek tuning indicator will disappear from the display.
  2. Change the frequency by turning the tuning knob to the left or right. Turning the knob once will change the frequency one step (see above). Holding the tuning knob in either direction will successively change the frequency at the prescribed step.



## Using the Tape Deck



### ● Before attempting operation...

- Reduce the volume by turning the volume control knob to the left.
  - Set the fader control to the left horizontal. (KE-3232)
1. Turning the power switch to the right causes power to switch ON.
  2. Loading a cassette tape into the load slot causes playback to begin automatically. At this time, the tape transport direction is noted on the display, along with the current time. The unit automatically switches to tape playback even if the radio is ON when the cassette is loaded.
  3. Adjust the volume and balance.

KE-3232

4. Adjust the tone to the desired position. To adjust bass, turn the volume knob while pressing it. For treble, turn the volume knob

after it has been pulled out until it clicks into place. Return the volume knob after adjusting the tone.

### KE-2222

#### 4. Adjust the tone.

5. When tape playback reaches the end of the tape, playback will automatically switch from the side being played to the opposite side (ie. Side A to Side B or vice versa) (Auto-reverse). To eject the tape during playback, simultaneously press the fast forward and rewind buttons.

- Do not try to eject the cassette immediately after insertion, as it will cause malfunction. Wait a few seconds.
- Be sure to eject the tape when the vehicle's ignition is turned OFF. Leaving the tape in the unit can deform the pinch roller causing wow and flutter during tape playback.

### ● Fast Forward/Rewind

Since the transport can be in either direction, both the left and right high-speed tape transport buttons can be regarded as fast forward/rewind buttons.

For fast forward, press the high-speed tape transport button that corresponds to the direction that is shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the opposite side of the tape (Auto-reverse).

For rewind, press the button that is opposite that of the direction shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the beginning of the same side of the tape (Auto-replay).

Fast forward and rewind can be terminated by pressing the respective opposite high-speed tape transport button.

### ● Direction Change Button

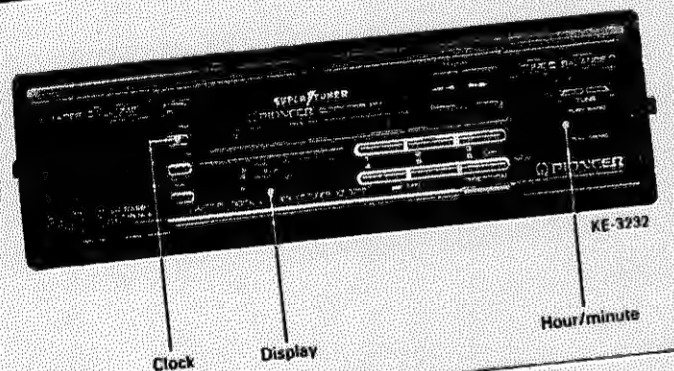
- This button is used to switch from one side of the tape to the other (from Side A to Side B or vice versa).

### ● Tape Select Switch (KE-3232)

This switch is used to switch to the proper mode for the tape being used and should be depressed when using chrome or metal tapes.



## Setting the Time



1. Press the clock switch to switch to the time display.
2. Pull the hour/minute control knob towards you and turn it to the left to advance hours. Turn to the right to advance minutes. Holding the knob in either position consecutively advances the respective hour/minute display.

## Care and Maintenance

- Do not use tapes longer than C-90-type (90 min.) cassettes. Longer tapes can interfere with tape transport.
- If the playback head becomes dirty, sound quality will suffer. Periodically (once or twice a month) clean the heads with a cotton swab soaked with alcohol. (Fig. 1)
- Storing cassettes in areas directly exposed to sunlight or high temperatures can distort them and subsequently interfere with tape transport. (Fig. 2)
- Store unused tapes in a tape case where there is no danger of them becoming loose or being exposed to dust.
- Frequencies and times stored in memory can be lost when the vehicle's battery is replaced. If this should occur, reprogram the preset memory.
- **After Service**

In the event this unit does not function properly, contact your dealer or the nearest authorized PIONEER Service Center.

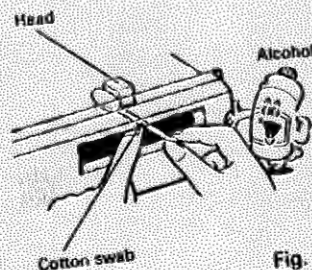


Fig. 1



Fig. 2



## Specifications

### General

Power source .....	14.4 V DC (10.8 — 15.6 V allowable)
Grounding system .....	Negative type
Max. current consumption	
(KE-3232) .....	2.5 A
(KE-2222) .....	1.8 A
Dimensions (chassis) .....	170(W) × 50(H) × 130(D) mm
(nose) .....	105(W) × 42(H) × 38(D) mm
Shaft interval .....	130 or 147 mm
Weight	
(KE-3232) .....	1.5 kg
(KE-2222) .....	1.4 kg

### Amplifier (KE-3232)

Maximum power output .....	8.5 W × 2/7 W × 4 (EIAJ)
Continuous power output .....	4.5 W × 2/3.5 W × 4
	(1% dist. at 1 kHz)
Load impedance .....	4 Ω (4 — 8 Ω allowable)
Maximum output level/output impedance (RCA) .....	500 mV/100 Ω
Tone controls (bass) .....	±10 dB (100 Hz)
(treble) .....	±10 dB (10 kHz)
Loudness contour .....	+8 dB (100 Hz) (volume: -30 dB)

### Amplifier (KE-2222)

Maximum power output .....	8.5 W × 2 (EIAJ)
Continuous power output .....	4.5 W × 2
	(1% dist. at 1 kHz)
Load impedance .....	4 Ω (2 — 8 Ω allowable)
Loudness contour .....	+8 dB (100 Hz) (volume: -30 dB)

### Tape player

Tape .....	Compact cassette tape (C-30 — C-90)
Tape speed .....	4.8 cm/sec.
Fast forward/rewind time .....	Approx. 100 sec. for C-60
Wow & flutter .....	0.13% (WRMS)
Frequency response	
(KE-3232) .....	Metal: 50 — 17,000 Hz (±3 dB)
	Normal: 50 — 14,000 Hz (±3 dB)
(KE-2222) .....	50 — 14,000 Hz (±3 dB)
Stereo separation .....	45 dB
Signal-to-noise ratio .....	52 dB (IEC-A network)

### FM tuner

Frequency range .....	87.5 — 108 MHz
Usable sensitivity .....	12 dBf (1.1 μV/75 Ω, mono)
50 dB quieting sensitivity .....	17 dBf (1.9 μV/75 Ω, mono)
Signal-to-noise ratio .....	70 dB (IEC-A network)
Distortion .....	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response .....	50 — 15,000 Hz (±3 dB)
Stereo separation .....	35 dB (at 65 dBf, 1 kHz)

### AM tuner

Frequency range (10 kHz channel step) .....	530 — 1,620 kHz
(9 kHz channel step) .....	531 — 1,602 kHz
Usable sensitivity .....	18 μV (25 dB) (S/N: 20 dB)
Selectivity (10 kHz channel step) .....	50 dB (±10 kHz)
(9 kHz channel step) .....	50 dB (±9 kHz)

### Note:

Specifications and the design are subject to possible modification without notice due to improvements.